Al Faez

Information and Communication Technology

ICT



For Primary 5

First Term

2023

Fathy Abo Zed

Al Faez

New ICT Curriculum

مطابقاً لآخر تعديلات منهج وزارة التربية والتعليم





* Explanation by pictures for each lesson.
* Questions for each lesson.
* Ministry book exercises.
* Monthly Model exams.
* A summary for all term titled of (The Exam's Night).
* General tests.
* Full answers for the book questions and test questions.

FOR PRIMARY 5

First Term

Contents

CamScanner

Study plan for the ICT curriculum
For the fifth grade of primary school
First term: 2022 / 2023

Month	Week	Date	Lesson	Contents
Theme1: *Role of Information and Communication Technology (ICT) in our lives.*				
October 2022	Week 1		Lesson 1	*Explorer in Active.*
			Lesson 2	*Computer accessories.*
	Week 2		Lesson 3	*Networks.*
			Lesson 4	*Digital communication tools.*
	Week 3		Lesson 5	*Internet connection problems and solutions.*
			Lesson 6	*Digital file management.*
			Lesson 7	*Information search strategies.*
	Week 4		Lesson 8	*Sharing information.*
			Review of the first theme.	
November 2022	Week 5			
	Theme2: *Digital safety and security precautions.*			
	Week 6		Lesson 1	*Explorer in Active.*
			Lesson 2	*Protecting ourselves and our information*
	Week 7		Lesson 3	*Password security.*
			Lesson 4	*How to deal with fake websites.*
	Week 8		Lesson 5	*Intellectual property rights.*
			Lesson 6	*Using digital sources*
December 2022	Week 9		Lesson 7	*My personal digital safety plan.*
			Lesson 8	*Documenting information appropriately.*
	Week10		*Refer to the second theme.*	
	Week11		*Project.*	
	Week12		*Project.*	
January 2023	Week13		*Project.*	

Theme 1



Role of Information and Communication Technology (ICT) in our lives

ESSENTIAL QUESTION:

How can we use ICT tools together, even when we're in different places?



SPOTLIGHT on theme 1

* **In this theme, you will learn about how different computer networks communicate, how to troubleshoot common computer hardware and software problems, and how to use ICT tools effective and efficiently.**

- **You will also create a spreadsheet to share information that you've found while researching online, making use of what you have learned.**

Lesson 1

Explorer in Active

Objectives By the end of the lesson, I will be able to:	Very well	OK	Need more work
- Give examples of how to share information.			
- Determine ways to record information.			
- Communicate and exchange information with my colleagues through one of the educational platforms.			

Engage:

- What ICT tools do you use regularly? How do they help you achieve different tasks?

Learn:



- **Fred Hiebert** is an archaeologist and explorer.
- He is also the Explorer in Residence for the National Geographic Society. As an archaeologist, he studies the past by excavating. observing, and writing about objects and sites.

- **In his daily work:**





Mr. **Hiebert** uses the Word processor program (Word) to write reports. and the Excel spreadsheet program to prepare and show graphs.



- When he needs to present the results of his research to his team, he uses the PowerPoint presentation program.
  He ensures that the slides are easy to read and make the information clear.

- When he wants to communicate more formally, he uses printed letters and e-mails, or he hands over documents in person.



- Mr. **Hiebert** is also a mentor who guides his students and colleagues around the world.

- Mentoring is advising or training someone on a subject you have a lot of experience in.
- **Mentored** is a great way to pass on knowledge and skills.
- Mentors share their experience, including problems that may arise and how to deal with them. This helps others advance faster.

- Mr. **Hiebert** generally prefers to communicate with people through face to face, in-person meetings. At times, this is not possible because he is away on an expedition, or the people he is meeting with are in different countries.
  In such cases, Mr. **Hiebert** holds virtual meetings using platforms like Zoom and WhatsApp.

- These meetings have to be scheduled at a time that is suitable for everyone, which can be difficult due to time difference between countries.

- Mr. **Hiebert** believes it is important to follow up a virtual meeting or telephone call with official notes documented in an email or sent as a Word document. This ensures that everyone involved has the same information and a copy to keep.

- Sharing information has become vital in our day-to-day lives.
- Technology has helped to make sharing information easier task.

- Moreover, the Ministry of Education makes sure that students have a record of what they should have learned in the classroom via the satellite broadcasting channels (**educational channels**) affiliated by the Ministry of Education and YouTube channel, "Madrasitna".

- **"Madrasitna"** is an opportunity for students to watch lessons whenever they choose.
- On the YouTube channel, there are videos on each school subject.

Video:

* Watch the video about **Fred Hiebert** and his work. What does he do to mentor others? What are the key skills to mentoring others? What ICT tools help him mentor?
- The URL: https://www.youtube.com/watch?v=nsSLv41qXMA



Explore:

- Sometimes technology can be challenging and scheduling calls can be difficult.
- That is why Mr. Hiebert always has to consider many factors, such as the time difference between countries. In your opinion, what other challenges are there when making online virtual calls?

....



Review:

(1) List the ways you use ICT tools. What ways might you use them in the future?

....

(2) Why is it important to share information in today's world?

....





Self-assess:

- Go to the objectives at the beginning of the lesson. Chick the correct I can… box.



Ministry book

Exercises?

(1) **Think and answer about me:**

a- What information you learned today would be useful for other?

....

b- Why is it important?

....

c- Where can you record that information?

....

d- How would you share that information?

....

(2) Research:



- Watch a video on the "Madrasitna" satellite or YouTube channel the questions.

a- What new information have you learned?

....

b- How will you record this new information?

....

c- What information might be useful for others?

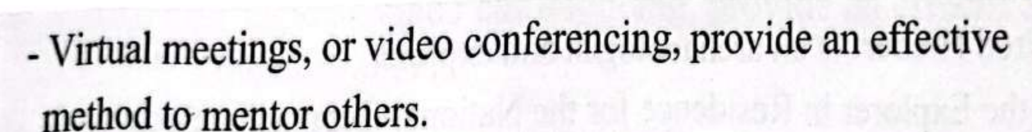
....



Comprehension:



(3) Read, think and answer:



- Virtual meetings, or video conferencing, provide an effective method to mentor others.
- During video conferencing, people can see and hear one another. They can also share information found on their screens and even send and receive documents.
- Virtual meetings became very popular in 2020. Since then, more and more people have used them worldwide.

a- In your opinion, how has video conferencing made it easier for people to mentor others?

....

b- You receive a message from a friend who is lost and you want to find try to find him.

....

c- How do virtual meetings help people communicate and share knowledge?

....

(4) Creative planning:

- Make a plan to mentor someone you would like to train on a topic that you know a lot about.

a- Who will you choose?

....

b- What information will you share with them?

....

c- Which virtual meeting platform will you use?

....



Remember

- Mr. Fred Hiebert is an archaeologist and explorer.
- He is the Explorer in Residence for the National Geographic Society.
- Mr. Fred Hiebert uses the PowerPoint presentation program to Present the results of his research to his team.
- The PowerPoint presentation program uses the slides which are easy to read and make the information clear.
- Mentored is a great way to pass on knowledge and skills.
- "Madrasitna" is an opportunity for students to watch lessons whenever they choose.
- The Ministry of Education offers students educational lessons through the satellite channels (educational channels) of the Ministry of Education. On the YouTube channel, there are videos on each school subject.
- Mr. Fred Hiebert holds virtual meetings using platforms like Zoom and WhatsApp because the people he is meeting with are in different countries.



Al-Faez Questions ?

⁎ First: Complete from words between brackets:

(Technology - archaeologist - Mentored - video conferencing - Word)

1. .... has helped to make sharing information easier task.
2. During .... people can see and hear one another.
3. Mr (Fred Hiebert) is an .... and explorer.
4. Mr (Fred Hiebert) uses the .... processor program to write reports.
5. .... is a great way to pass on knowledge and skills.

⁎ Second: Put (✓) or (×):

1. Virtual meetings, or video conferencing, provide an effective method to mentor others. (   )
2. Mr (Fred Hiebert) is a building engineer. (   )
3. Mr (Fred Hiebert) uses the Word processor program (Word) to prepare and show graphs. (   )
4. Mr (Fred Hiebert) is the Explorer in Residence for the National Geographic Society. (   )
5. Sharing information has never become vital in our day-to-day lives. (   )
6. Mr (Fred Hiebert) is a mentor who guides his students and colleagues around the world. (   )
7. Mentoring is advising or training someone on a subject you have a lot of experience in. (   )

Lesson 2

Computer accessories

Objectives By the end of the lesson, I will be able to:	Very well	OK	Need more work
- Describe basic computer accessories concepts.			
- Describe common computer problems.			
- Explain how to solve some common computer problems.			





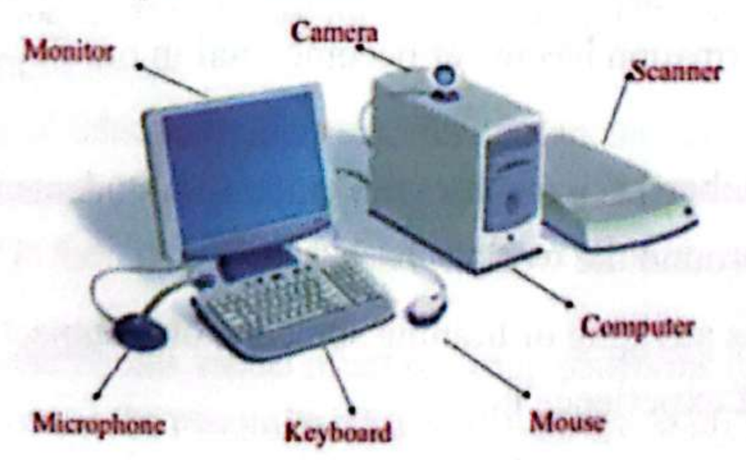
Engage:

- What can a computer do? How does the hardware enable it to do these things?

Learn:

- Like Mr. **Fred Hiebert**, you can use ICT tools to share ideas.
- Your computer hardware must be working properly.
- Read about the main computer hardware components and then potential problems/solutions.







External Hard Drive: Like an HDD but much faster



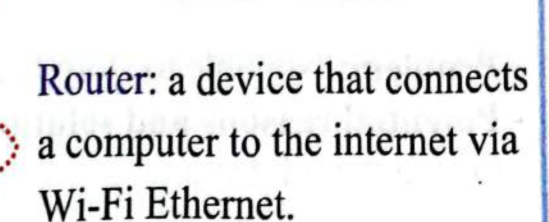
Ethernet cable: a cable that connects a computer or laptop to a router



Flash Memory



HDMI (high-definition multimedia interface): a cable that transmits audio and video from/ to devices



Router: a device that connects a computer to the internet via Wi-Fi Ethernet.



Ethernet port: connects an ethernet cable; ethernet is more stable and faster than Wi-Fi.

* Units of measurement:

1	**bit**	The smallest unit of data.
2	**byte**	1 byte = 8 bits = 1 character. Example: the word "cat" has three letters and would need three bytes.
3	**Kilobytes** (KB)	= 1024 (B)
4	**Megabyte** (MB)	= 1024 (KB)
5	**Gigabyte** (GB)	= 1024 (MB)
6	**Terabyte** (TB)	= 1024 (GB). The largest unit of data.

- **Mbps**: megabits per second: measures the speed of a network or internet connection (the faster the speed, the better).
- **GHz** (GigaHertz): measures the number of cycles your CPU carries out per second: the higher the number, the faster the speed.

* Potential computer problems and solutions:

- **Problem:** Trouble processing large files, like a big PowerPoint presentation.
- **Potential reasons and solution:** Not enough graphics storage – shut down some programs.

- **Problem:** Not able to store files.
- **Potential reasons and solution:** Not enough space - move old files to an external drive.

- **Problem:** A poor video-conference connection.
- **Potential reasons and solution:** Slow wireless internet connection - try an ethernet connection.

- **Problem:** Home internet connection not working.
- **Potential reasons and solution:** connection interrupted-use ethernet or contact ISP.

Explore:

- Work with a partner. Think about a common computer problem. Write it down. Your partner will then ask you questions to guess the problem. With your partner, come up with possible solutions.

....

Review:

(1) Your computer is not running properly. What steps would you take to identify the problem? What steps would you take to solve the problem?

....

(2) Someone needs help with computer problems. Give advice.

....



Self-assess:

- Go to the objectives at the beginning of the lesson. Chick the correct I can... box.



Ministry book

Exercises ?

Comprehension:

(1) Read and write:

- *Read the scenarios. Suggest solutions.*

a- You need to download multiple large files from the internet.

....

b- You want your computer to hold more data.

....

c- You want to play an online video game with lots of animation.

....

d- You want to use multiple apps at once.

....

(2) Read, choose, and answer:

- Which computer accessory would best ensure you have a good connection during a video conference? Explain why you chose it.

....

Critical thinking:

(3) Think and write:

- Explain why it's so important for your computer's CPU to run properly. How does a slow or poorly running CPU affect a computer?

....

....

(4) Think and discuss:

Work with a partner. Take turns in suggesting and solving possible computer problems. One person describes a problem, and the other gives advice about how to resolve it. Then switch roles. Afterward, write notes showing the problems and solutions you discussed.

* Problem: ....

- Solution: ....

....

* Problem: ....

- Solution: ....

....



ICT and Me:

(5) **Think and answer:**

- What computer accessory problems have you encountered at home or at school? Were you able to resolve them? How? If not, do you think you could if faced with the same problem now?

....



Remember

- You can use ICT tools to share ideas, so your computer hardware must be working properly.
- Ethernet cable: a cable that connects a computer or laptop to a router.
- Router: a device that connects a computer to the internet via Wi-Fi Ethernet.
- HDMI (high-definition multimedia interface): a cable that transmits audio and video from/ to devices.
- Ethernet port: connects an ethernet cable; ethernet is more stable and faster than Wi-Fi.

Units of measurement:

Bit: The smallest unit of data.
Byte: 1 byte = 8 bits = 1 character.
Kilobytes (KB): = 1024 byte
Megabyte (MB): = 1024 (KB)
Gigabyte (GB): = 1024 (MB)
Terabyte (TB): = 1024 (GB), the largest unit of data.

- Mbps: Megabits per second: measures the speed of a network or internet connection (the faster the speed, the better).
- GHz (GigaHertz): measures the number of cycles your CPU carries out per second: the higher the number, the faster the speed.



Questions



*** First: Rearrange the following units of measurement:**

	The data units	The data units arranged
1	Gigabyte (GB)	(..................)
2	Terabyte (TB)	(..................)
3	Bit	(..................)
4	Byte	(..................)
5	Kilobytes (KB)	(..................)
6	Megabyte (MB)	(..................)

*** Second: Complete from words between brackets:**

(Router - Ethernet cable - byte - three bytes)

1. The word "cat" has three letters and would need ....
2. ...... is a cable that connects a computer or laptop to a router.
3. .... a device that connects a computer to the internet via Wi-Fi Ethernet.
4. .... is equals eight bits and also equals one character.

*** Third: Put (✓) or (×):**

1. A kilobyte (KB) is equal to 1024 Megabyte. (   )
2. Gigabyte (GB) is the smallest unit of data. (   )
3. Kilobytes (KB): = 1024 byte. (   )
4. Megabyte (MB) is largest unit of data. (   )
5. GHz (GigaHertz): measures the number of cycles your CPU carries out per second. (   )

Lesson 3
Networks



Objectives By the end of the lesson, I will be able to:	Very well	OK	Need more work
- Explain what a network is.			
- Describe different types of networks.			
- Explain how far communication via computers and communication devices has advanced from the 1980s to today.			

Engage:

- What does the word network mean to you? How many networks, digital or otherwise, do you think you have or you have dealt with?



Learn:

- Networks are groups of people, or things, that are connected to each other for a common purpose.
- Think about your family, from your parents to your cousins. It can be thought of as a family network. Together, you form links that create it.
- You bond and communicate with each other, sharing support and experience.

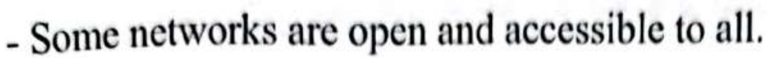
- Similarly computer networks connect computers with each other, to share important information and data.
- You may have your own personal computer network at home.
- If you have a computer connected to another computer or device such as a printer or router, then you have your own personal Local Area Network (LAN).
- **The internet** is a network that connects computers, and the people using them, from all around the world.
- **To connect your computer to the internet** you need a gateway, such as a router, which connects your computer to an ISP (Internet Service Provider), such as the internet service provided by Egyptian companies to citizens.
- **Gateway**: A way to access something.
- The World Wide Web (WWW) is part of the internet network, made up of web pages that people can navigate.
- The Egyptian Knowledge Bank is on the WWW, available for free to all Egyptians who register on the site.

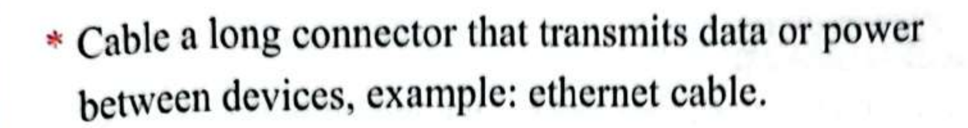
Egyptian Knowledge Bank
بنك المعرفة المصري

- Another type of network is an intranet. **An intranet**, unlike the internet, is private, restricted to only those that are part of the business, school, or organization that it is connecting.



- **A closed network,** such as one in a computer lab, may only have computers linked by cables to allow for file sharing.
- Some networks are open and accessible to all.







* Cable a long connector that transmits data or power between devices, example: ethernet cable.

Explore:

- Work with a partner. Think about different sports at school. Together, choose one and think about how it can be considered its own network. Make a poster to illustrate and label how it works as a network. Share your poster with the class.

....
....
....

Review:

(1) Discuss different kinds of networks and their shared characteristics.

....
....
....

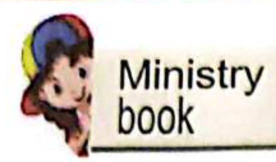
(2) Talk about a computer network you have at home or at school.

....
....

Self-assess:

- Go to the objectives at the beginning of the lesson. Chick the correct I can… box.





Exercises ?

Comprehension:

(1) Read and answer:

- Give an example of a network that has been covered in this lesson. Explain what makes it a network. (Remember: a network isn't just Computers linked together!).

....

....

(2) Read, think, and write:

- Compare and contrast intranet and internet networks. An example is included.

Intranet	Both	Internet
closed computer network	share information	open computer network

Timeline

80S dial-up internet connection	late 80s Digital subscriber line (DSL)
Used phone line to connect to internet (couldn't use phone when on internet) a slow but stable connection.	A high-speed connection that uses the same home phone wires to connect to the internet, allowing the phone and the internet to be used simultaneously.

Critical thinking:

(3) Look think and write:

- Look at the timeline at the bottom of the page. How do you think the advancements in technology helped people communicate in their everyday lives, both in the past and now?

....

....

....

....

ICT and Me:

(4) Think and answer:

- Write about a time when you've used a network of any kind to communicate with friends.

....

....

....

Timeline

90s	2000+
emergence of the World Wide Web abbreviated to WWW, which is a large set of web pages that are linked to each other using hyperlinks	Wi-Fi devices become popular, can now access internet from your smartphone - portable internet Service, hotspots to allow you to access the internet anywhere on smartphone can help provide internet Service to other devices you may have as well.



Remember

- Networks are groups of people, or things, that are connected to each other for a common purpose.
- Your family can be considered a family network, between which there are links.
- Computer networks connect computers with each other, to share important information and data.
- Local Area Network (LAN) is a computer connected to another computer or device such as a printer or router.
- The internet is a network that connects computers, and the people using them, from all around the world.
- To connect your computer to the internet you need a gateway, such as a router, which connects your computer to an ISP (Internet Service Provider).
- Gateway: A way to access something.
- The World Wide Web (WWW) is part of the internet network, made up of web pages that people can navigate.
- The Egyptian Knowledge Bank is on the WWW, available for free to all Egyptians who register on the site.
- An intranet, is private, restricted to only those that are part of the business, school, or organization that it is connecting.
- A school's computer lab could have its own closed computer network.
- **A closed network**, such as one in a computer lab, may only have computers linked by cables to allow for file sharing.
- Some networks are open and accessible to all.



Al-Faez **Questions ?**



⋆ First: Choose the correct answer:

1. The advancements in .... helped people communicate in their everyday lives, both in the past and now?
(Network – Technology – Cable)

2. .... is a long connector that transmits data or power between devices. as ethernet cable. (Closed network – Technology – Cable)

3. A ...., such as one in a computer lab.
(Closed network – Technology – Internet)

4. ...., are groups of people, or things, that are connected to each other for a common purpose. (Networks – Technology – Cable)

5. (.......) a way to access something. (Network – Gateway – Cable)

⋆ Second: Put (✓) or (×):

1. Cable is a long connector that transmits data or power between devices, as ethernet cable. ( )

2. Cable is on the WWW, available for free to all Egyptians who register on the site. ( )

3. Computer networks connect computers with each other, to share important information and data. ( )

4. The internet is a network that connects computers, and the people using them, from all around the world. ( )

5. The Egyptian Knowledge Bank, is private, restricted to only those that are part of the business, school. ( )

Lesson 4

Digital communication tools

Objectives By the end of the lesson, I will be able to:	Very well	OK	Need more work
- Describe different ways that people can use computer networks to communicate.			
- Explain basic scientific concepts relating to ICT tools.			
- Describe how computer networks can help us in our daily lives.			

Engage:

- How do you feel about talking to your friends face to face? How is it different from communicating on the telephone / by email / virtually?

Learn:

- We communicate using computer networks every day.
- Every time we use phone to send a text or buy something, take an online class or download, upload a video, or use an app or program, we using a computer networks.

- Business and organizations use networks every day to share information some private and in closed networks, and some public, or in open network.

Google

- Household items can be part of a network too, this is called the "Internet of Things".
- Internet of Things consists of devices linked to the internet via Wi-Fi.
- These devices can be controlled, whether you're in the same room or in another city.
- Examples include Bluetooth speakers to listen to music, and home appliances, such as a digital refrigerator and washing machine that can be turned on/off using specific apps.

* **Bluetooth** is a networking technology that connects wireless mobile devices over a short range to form a network to transition data between different devices.



* **Computer networks** give people of determined more independence at home or in public places. This helps them to save money and time, to be independent in saving as well as helping them to increase their level of self-confidence.



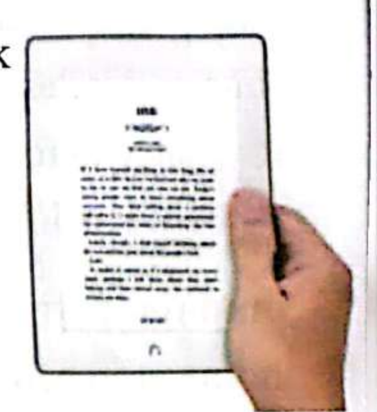
Networks
and people of determination

- Hatem uses computer networks daily. He listens to music on his Bluetooth speakers.

- His favorite website is the Egyptian Knowledge Bank because it has a lot of interesting information.
- His favorite subject is archaeology. One day, he wants to be an explorer like Fred Hieber!

- Hatem also shops online. He thinks e-commerce makes life so much easier for everyone.
- He always asks his parents before he goes online shopping.
- His parents remind him to think about digital privacy, so he's extra safe about giving out his information.

- Hatem is visually impaired, so he does schoolwork online, using screen readers, for audio feedback, and for help with reading braille.
- Screen readers helps Hatem do everything he needs to do, including writing papers and accessing documents on his laptop.



Explore:

- **Work in-group.** You and three friends want to start a campaign to clean up a local community park. You want to:

* Reach out to as many people as possible.

....

* Share important information about the campaign

....

* Come up with ways to track tasks and your campaign's progress.

- How would you use ICT tools/ computer networks to help you with the campaign? Share your ideas with the class.

....

....

Review:

(1) Explain how people in different places use computer networks to communicate.

....

....

(2) How can computer networks help us in our daily lives? Provide specific examples.

....

....

Self-assess:

- Go to the objectives at the beginning of the lesson. Chick the correct I can… box.

Ministry book **Exercises**

Comprehension:

(1) Read and answer:

- Give examples of items in your home or classroom that can be described as "internet of things" devices. Explain

....

....

....

....

(2) Look and answer:

- What kind of computer networks might be set up in the following places? Explain your choices.







(3) Read and write:

- Express the following terms in your own words.

(1) Internet: ....

(2) Website: ....

(3) E-commerce: ....

(4) Online shopping: ....

....

Critical thinking:

(4) Think and write:

- Think of ways you can be sure to use computer networks responsibly. Write a list.

....

....

....

- Compare your list with a partner. Does your partner have suggestions that to your list? If so, be sure to add them.

....

....

Cross-curricular Connections: Cross skills:

(4) Think and write:

- It's Career Day at school! Sara is talking about her father's job. Read, and then answer the questions that follow.

> - My dad owns his business. He usually works at his office, but sometimes, he works from home. He has a home office that includes a laptop. It links him to his company's intranet. My dad is constantly video conferencing with clients on his laptop. He uses his social media apps on his phone to communicate with clients and other business owners.

(1) How do ICT tools help Sara's dad at work as a business owner?

....

(2) Think about Mr. Hiebert and how he uses ICT tools to communicate. How do these tools help him at work as an archaeologist?

....

....

ICT and Me:

(4) Think and answer:

- Think about the ICT tools you learned about in this lesson. When did you or when would you use these ICT tools in your own life? What about your family or friends?

....

....

....



Remember

- We communicate using computer networks every day.
- We using a computer networks every time we use phone to send a text or buy something, take an online class or download, upload a video, or use an app or program.
- Business and organizations use networks every day to share information.
- There are some private closed networks, and public open networks.
- Household items can be part of a network too, this is called the "Internet of Things".
- Internet of Things consists of devices linked to the internet via Wi-Fi.
- These devices can be controlled, whether you're in the same room or in another city.
- Bluetooth is a networking technology that connects wireless mobile devices over a short range to form a network to transition data between different devices.
- Computer networks give people of determined more independence at home or in public places. This helps them to increase their level of self-confidence.



Al-Faez Questions



✶ First: Put (✓) or (×):

1. All computer networks are open public networks. (   )
2. Hatem never asked his parents before he went online shopping. (   )

3. Household items can be part of a network too, this is called the "Closed computer network". ( )

4. We can be controlled Internet of Things devices, the same room or in another city. ( )

5. Hatem's favorite subject is geometry. One day, he wants to be an explorer like Fred Hieber! ( )

6. Computer networks give people of determined more independence at home or in public places. ( )

7. Hatem's parents remind him to think about digital privacy, so he's extra safe about giving out his information. ( )

★ Second: Complete from words between brackets:

(Bluetooth - e-commerce - Screen readers - Internet of Things computer networks - Egyptian Knowledge Bank)

1. .... consists of devices linked to the internet via Wi-Fi.
2. Hatem's favorite website is the ...... because it has a lot of interesting information.
3. We communicate using .... every day.
4. .... is a networking technology that connects wireless mobile devices over a short range to form a network to transition data between different devices.
5. Hatem thinks .... makes life so much easier for everyone.
6. ... helps visually impaired do everything he needs to do, including writing papers and accessing documents on his laptop.

Lesson 5

Internet connection problems and solutions

Objectives By the end of the lesson, I will be able to:	Very well	OK	Need more work
- Describe common problems in ICT.			
- Come up with solutions to common ICT problems.			
- Explain how following a process helps me to troubleshoot problems.			

Engage:

- What issues have you run into with ICT tools? Did you resolve them? Did someone help you?



Learn:

- Fred Hiebert uses Word, Excel, and PowerPoint to make presentations to display his discoveries, he use email and video conferencing to share them colleagues. While using these programs, he can face many problems to the device he's using or its software, or to a weak or interrupted internet connection.





Following a process

- **Follow this troubleshooting process to help with computer problems:**

(1) Identify the problem. What's the issue? Is it a hardware or software problems?

(2) Think about and plan different ways you might solve the problem.

(3) Go through your potential solutions to the problem. Try each one until you find a solution.

(4) If you do not find a solution to the problem, you should ask your teacher or a member of your family for help.

Common computer problems and possible solutions:

- **Problem:** Computer slows down when opening an app.
- Possible solutions: Shut down and restart; check for software updates; delete unwanted apps.

- **Problem:** Browser running slow.
- Possible solutions: Check Wi-Fi signal; make sure to update the apps on your device.

- **Problem:** No internet connection.
- Possible solutions: Use the software to troubleshoot your Wi-Fi connection; check that the router is connected; restart your router; try a new Ethernet cable; contact the customer service of your ISP for help.

- **Problem:** Slow to download.
- Possible solutions: Restart computer and router; check internet speed

Explore:

- **In groups,** discuss the following scenario: Your teacher has asked you to find information on a particular subject, but your internet connection isn't working. What other ways can you find the information you need? Present your ideas to the class.

Review:

(1) Go back to Lesson 2. Review the possible problems and solutions provided. Come up with a new possible solution to each problem.

....

(2) Discuss using a process to troubleshoot problems. How can following a process help you to become a more educated digital citizen?

....



Self-assess:

- Go to the objectives at the beginning of the lesson. Chick the correct I can… box.





Ministry book

Exercises



Comprehension:

(1) **Read and answer:**



- List three possible computer problems that you may encounter at school.

....

....

(2) **Think and answer:**

- Provide two solutions to each problem above.

Problem 1: ....
....
Problem 2: ....
....
Problem 3: ....
....

Critical thinking:

(3) **Look, think, and answer:**

(1) Your cell phone has not been working correctly since a new app was installed. How can it be resolved?

- Problem: ....
- Solution: ....

(2) My browser is working very slowly, but I have a good Wi-Fi signal. He can it be resolved?

- Problem: ....
- Solution: ....
....

(3) I have no internet connection on my PC. How can it be resolved?

- Problem: ....
- Solution: ....

Issues and challenges:

(4) **Read and solve:**

(1) You just downloaded some files from the internet. Suddenly, your computer starts to run slowly.

- You have an external hard drive with plenty of room so that's not the problem. You close all the applications that are running and then You restart your computer, but that doesn't help either.
- What might be the issue? How can it be resolved? You might need an expert technician to help you.

....

....

(2) You want to make an attractive presentation. You immediately begin using Word and then realize you need images, graphs, and tables. What should you do?

....

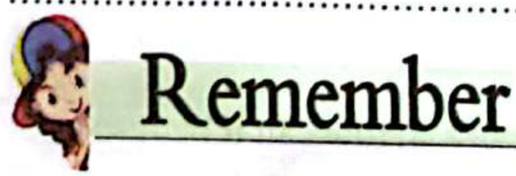


(5) Read and answer:

- How confident are you when it comes to troubleshooting common ICT problems? How comfortable are you when it comes to asking others for help when you need it? Explain.

....

....



- Fred Hiebert uses **Word, Excel,** and **PowerPoint** to make presentations to display his discoveries.
- Fred Hiebert uses email and video conferencing to share them colleagues.
- While using Word, Excel, and PowerPoint programs, you can face many problems to the device you are using or its software, or to a weak or interrupted internet connection.



Al-Faez Questions



✶ First: Choose the correct answers:

1. Fred Hiebert uses email and …. to share them colleagues.
   (Computer - video conferencing - PowerPoint)
2. The first stage of problem solving is …………. What's the issue? Is it a hardware or software problems?
   (Planning different ways - problem - defining the problem)
3. If you do not find a ….. to the computer problem, you should ask your teacher or a member of your family for help.
   (video conferencing - solution - PowerPoint)
4. Fred Hiebert uses Word, Excel, and PowerPoint to make presentations to display his discoveries.
   (Word and Excel - PowerPoint - all of the above)

✶ Second: Match from (A) to the suitable answer from (B):

	(A)		(B)
1	Problem: Slow to download.	A	Possible solutions: Shut down and restart; check for software updates; delete unwanted apps.
2	Problem: Browser running slow.	B	Possible solutions: Use the software to troubleshoot your Wi-Fi connection; check that the router is connected and restart it.
3	Problem: Computer slows down when opening an app.	C	Possible solutions: Restart computer and router; check internet speed.
4	Problem: No internet connection.	D	Possible solutions: Check Wi-Fi signal; make sure to update the apps on your device.

Lesson 6

Digital file management

Objectives By the end of the lesson, I will be able to:	Very well	OK	Need more work
- Describe different device accessories.			
- Describe digital file management.			
- Explain how to organize information.			

Engage:

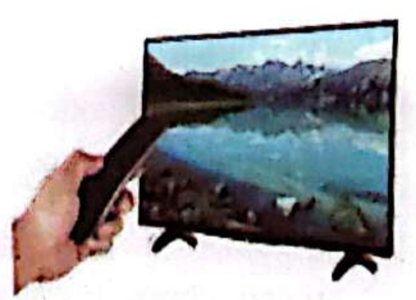
- What is the best way for you to keep your schoolwork, toys, photographs and games clothes organized?

Learn:

Information is everywhere

- What do these photos represent?
- Where are students finding information?







How and where do you save and store information



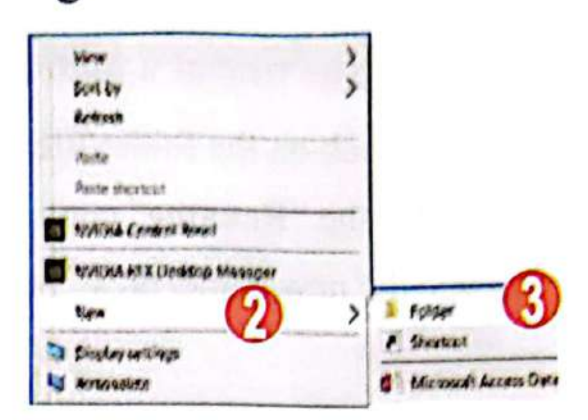
Store and share information with Flash Memory



Use the images scanning and save them for later

How to get organized using ICT tools?

Create the main folder



(1) Right click on the place where you want to create the folder.

(2) Select **New**.

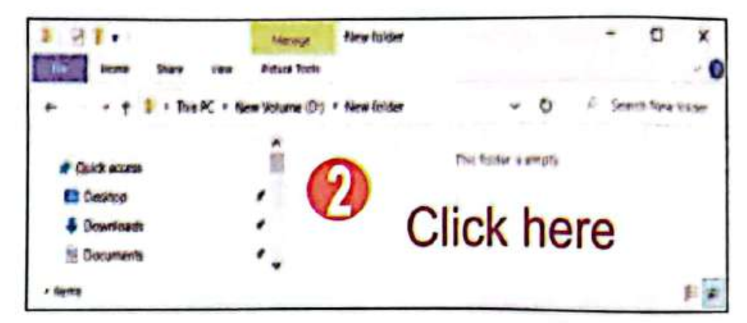
(3) Then select **Folder** from the submenu.

- A new subfolder appears.

Add sub-folders



(1) Open the window of the main folder by double clicking on the folder icon.



(2) Right click within the new folder window.

(3) Select **New**.

(4) Then select **Folder**.

- A new subfolder appears within the main folder window.



Give each file a name



- **Change the title of a folder/file:**

(1) Right click on the folder/file icon.

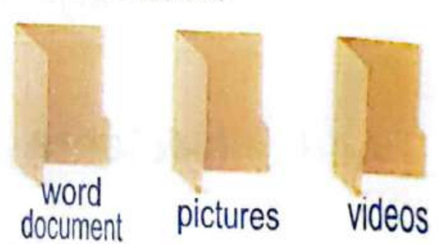
(2) Choose the "**Rename**" command.

(3) Type the new name, press **Enter**.

Note:

- Place documents, images, and videos in the correct folder.
- It is preferable to put an appropriate title for each folder.

Example: The folder for pictures is titled "Pictures", and Videos folder titled "videos" and so on.



Explore:

- How would you organize your schoolwork and personal files? Create a plan for both and discuss with a partner.

Review:

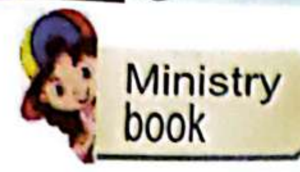
(1) How do digital accessories input their data for processing?

(2) How do files help keep your information organized?

Self-assess:

- Go to the objectives at the beginning of the lesson. Chick the correct I can… box.





Ministry book

Exercises ?



Comprehension:

(1) Look and answer:



- List Look at the chart. Provide an example of how you might personally use each device accessory.

1	Scanner		....
2	Digital camera		....
3	QR code		....

(2) Look and answer:

- Look at the files shown in the two figures below. Which file system is better organized? Explain why.





Critical thinking:

(3) Plan and practice:

- With a classmate, discuss how you might organize the files from task 2 that weren't well organized. Write the steps you will take.

....

....

....

- Now draw your newly organized file system.

ICT and Me:

(4) Think and answer:

- Organize files on a personal or school-owned device. Explain how you organized them.

....

....

....



Remember

* Create the main folder:

(1) Right click on the place where you want to create the folder.

(2) Select **New**.

(3) Then select **Folder** from the submenu. A new subfolder appears.

* Add sub-folders:

(1) Open the window of the main folder by double clicking on the folder icon.

(2) Right click within the new folder window.

(3) Select **New**.

(4) Then select **Folder**.

- A new subfolder appears within the main folder window.

* Change the title of a folder/file:

(1) Right click on the folder/file icon.

(2) Choose the "**Rename**" command.

(3) Type the new name, press **Enter**.

- It is preferable to put an appropriate title for each folder.



Al-Faez Questions



* First: Put (✓) or (×):

1. Each file must be given a unique title. (   )
2. To change the title of a folder, choose the **delete** command. (   )
3. Choose **Open** command, from menu to add sub-folders. (   )

4. We cannot add sub-folder to the main folder. ( )
5. To create a new folder, right click on the place where you want and select new, then select **Folder** . ( )

* Second: Choose the correct answers:

1. It is preferable to put an appropriate name for each .... indicating its content.
   (New - folder - Flash Memory)
2. To change the title of a folder, choose the ...... command.
   (Rename - New - Save)
3. Select .... command from main menu, to create a folder.
   (New - Rename - Save)
4. Use the images scanning and ..... them for later.
   (New - Rename - Save)
5. Store and share information with ....
   (New - folder - Flash Memory)

* Third: Rearrange the following steps to create a folder:

	The steps	arranged steps
1	Then select Folder from the submenu.	(..............)
2	Right click on the place where you want to create the folder.	(...............)
3	Select New.	(.............)
4	A new subfolder appears.	(.............)

Lesson 7

Information search strategies



Objectives By the end of the lesson, I will be able to:	Very well	OK	Need more work
- Explain how effective research planning helps access information online.			
- Discuss how using of keywords and subtopics helps in enhance the accuracy of search results.			
- Explain effective strategies when searching online and recording results.			

Engage:

- What are strategies you use or would use when searching for information online.
  What advice would you give to others?



Learn:

- The Internet contains a huge amount of information.
- It is important that you plan your searches.
- You must also analyze and check your information you find critically.
- The internet is very big and you must decide exactly what information you want.



- A lot of the information you find when in searching will need evaluating selecting and organizing, so you will this need to process and organize information.
- It is important to work collaboratively with classmates when construction knowledge.



Here are some suggested steps.

* Decide on a topic.
* Break the topic down into smaller subtopics. For example:
  - What information about the original will we have to collect to build a replica?
  - What technology will be used to gather the information about materials, shapes, colors, sizes.
  - What tools will be used to store this information?
* Conduct a knowledge share with your classmates. What do you know about already? What do you not know?
* Decide who is going to search for which information.
* It is good practice for two people to search for the same information and then share and contrast their results.
* Decide on keywords for searches about the subtopics, as it is not a good idea to use full sentences when searching.
* Share your results. Decide how to select and organize the information, and then how to organize it for presentation.

Remember keywords

- Remember in Grade 4. Theme 2. lesson 5, we looked at keywords. Sometimes you might have to try different keywords in your online searches. When you do, consider using synonyms of the words. Use the same strategies above, but with different words with similar meanings.

Explore:

- Choose someone in your community that you would like to mentor. It could be friend, a family member, or a younger person that looks up to you.
- Choose a topic to help them with. Write it down. You'll be researching the topic in Learn by Doing. Some topic ideas: Ancient Egyptian inventions, local community concerns, recycling choices/challenges, Egyptians and their diets/ nutrition, search for other water sources, pollution problems and solutions, etc.
- Choose specific aspects and keywords of that topic to concentrate on when researching the topic. Write them down.

Review:

(1) How can planning beforehand help you do better searches?

(2) Your teacher asks you to research the origins of traditional Egyptian songs. You type the following: "What are some traditional Egyptian songs and where did they come from?". You realize quickly that you need to narrow your search. Provide an example of how you could narrow it.



Self-assess:

- Go to the objectives at the beginning of the lesson. Chick the correct I can… box.





Ministry book Exercises ?

Research:

(1) Search and organize:



- Use your notes from Explore to research your topic of interest. Be sure in search for images in addition to text.

(1) Evaluate your search results and choose what you feel is relevant and reliable. What sources did you choose? Include them here, with a short description:

....

....

(2) Organize your sources. Then explain the method you used to organize them.

....

....

(3) Write notes or an outline to prepare to write a report of your findings

....

(2) Write what you learned:

- Write a report using the information you found online.

....

....

....



ICT and Me:

(3) Think and answer:

(1) What strategies did you use during your online search?

....

....

(2) What strategies did you use when it came to evaluating/choosing sources?

....

....

(3) What strategies did you use when it came to organizing your information?

....

....

- Organize files on a personal or school-owned device. Explain how you organized them.

....

....

....

Remember

- The Internet contains a huge amount of information.
- It is important that you plan your searches.
- When you search for information, you must analyze and check your information you find critically.
- You should divide the research topic into smaller subtopics.
- It is important to work collaboratively with classmates when construction knowledge.



Al-Faez Questions



✱ First: Put (✓) or (×):

1. You must specify precisely the information you seek to reach online. ( )
2. A lot of the information you find during your search dose not need to evaluate selection or organization. ( )
3. It is not important when looking for information to plan your research and verify the information you find critically. ( )
4. It is important to work collaboratively with classmates when construction knowledge. ( )
5. The Internet contains a huge amount of information. ( )

✱ Second: Choose the correct answers:

1. You should .... the research topic into smaller subtopics.
   (critically - divide - information)
2. The ..... is very big and you must decide exactly what information you want.
   (divide - information - internet)
3. When searching online, specify ...... to search for subtopics rather than using large sentences or whole sentences.
   (keywords - subtopics - information)
4. To prepare a ......, share your search results and decide how to format the information.
   (presentation - Online - searching)

Lesson 8

Sharing information



Objectives By the end of the lesson, I will be able to:	Very well	OK	Need more work
- Discuss where might choose to post information on an intranet.			
- Discuss when I might choose to post information on the internet.			
- Explain how to share info on spreadsheets.			

Engage:



- What are different ways you can share information with others, both in intranet and online?



Learn:

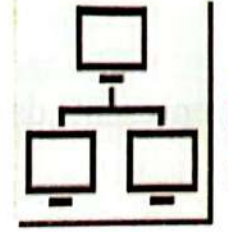
Use graphs and charts

- Create a graph or chart to share information.

Communicating with ICT tools

- When sharing information online, you must decide which information should be shared using an intranet network or the internet.





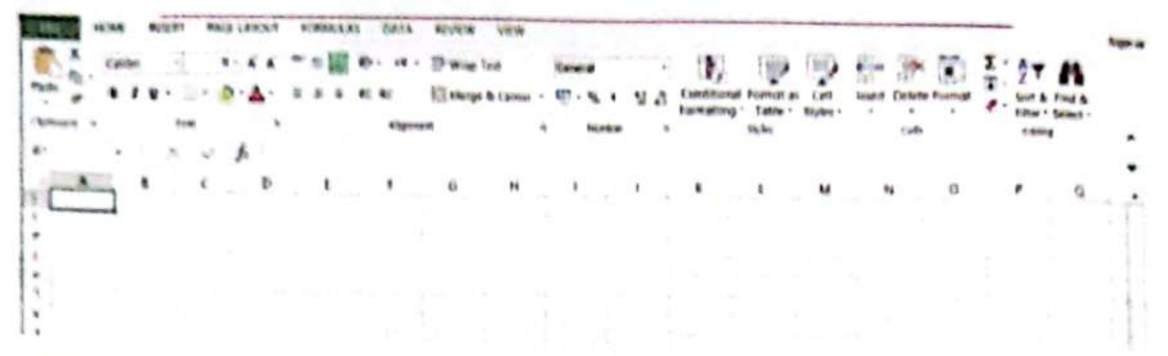


Use Microsoft Excel



- Sorting info in alphabetical order:

* Go to the toolbar and click on Data. Then click on Sort.



*** You can set formulas in cells to add (+), subtract (-) multiply (x), or divide (/):**

(1) Click on the cell you want to set a formula.

(2) Type "=". This tells Excel you are creating a formula.

(3) Decide which cells are in your formula. Reference the letters (top of columns) and numbers (numbers to the left of the rows).

For example:

- let's say you want to add the data from columns A, B, and C, row 8. You would type the following in the cell that will create the formula:
  = A8 + B8 + C8

  Let's say you wanted to add numbers from the same column (A), but different rows (4-6). The column information would still come first:
  = A4 + A5 + A6

- Excel program that represents data in the form of a graph in different formats.

Explore:

- Go back to your topic from Lesson 7. How can you use a spreadsheet to share information about the topic you researched? Create a spreadsheet with the information.

Review:

(1) Discuss information you may feel comfortable sharing on the internet. Discuss information you may prefer to share using an intranet.

(2) Explain ways a spreadsheet allows you to share data.

Self-assess:

- Go to the objectives at the beginning of the lesson. Chick the correct I can… box.



Ministry book

Exercises



Comprehension:

(1) Read, think, and write:

(1) You want to subtract data from Columns A, C, and E, row 6. Write formula you would use.

....

(2) Give an example of information that you might set as a chart or graph.

....

(3) Give an example of information that might be shared on a school might be network. An example of information that might be shared on webpage.



Life skills:

(2) Prepare to share:

(1) Review the following:

- Your report from Lesson 7.
- Your spreadsheet from Lesson 8's Explore.

(2) Decide how you will share your information with the person you have chosen. Circle your choice. Then explain your choice.

intranet   internet

....

....

(3) What software / ICT tools will you use to share your information?

....

(3) Create your presentation:

- Using the information you've organized, create your presentation using the software of your choice.

(4) Share your presentation:

- Share your presentation with the person you chose, using the method you chose.

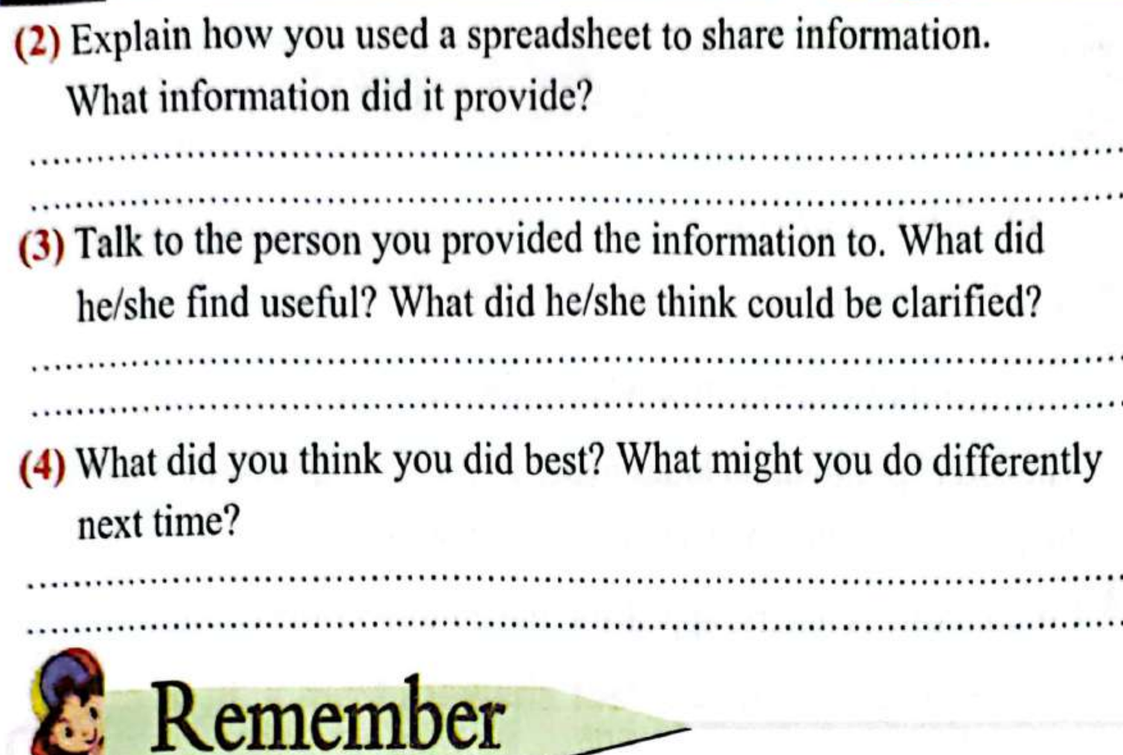
ICT and Me:

(5) Think and answer:

Now write about your experience.

(1) Did you come across any problems while researching your topic or creating your presentation? How did you troubleshoot / resolve your problems?

....



(2) Explain how you used a spreadsheet to share information.
What information did it provide?

....

....

(3) Talk to the person you provided the information to. What did he/she find useful? What did he/she think could be clarified?

....

....

(4) What did you think you did best? What might you do differently next time?

....

....

Remember

- When sharing information online, you must decide which information should be shared using an intranet network or the internet.
- The internet is used to share over the web and is less secure.
- An intranet is used to share in a closed network and is more secure.
- Sorting info in alphabetical order: Go to the toolbar and click on Data. Then click on Sort.

* You can set formulas in cells to add (+), subtract (-) multiply (x), or divide (/):

(1) Click on the cell you want to set a formula.
(2) Type "=". This tells Excel you are creating a formula.
(3) Decide which cells are in your formula. Reference the letters (top of columns) and numbers (numbers to the left of the rows).

- Excel program that represents data in the form of a graph in different formats.



Al-Faez Questions



★ First: Put (✓) or (×):

1. Row title is numbers, appears at the left of the row. (   )
2. Sorting info in alphabetical order, click on Copy. (   )
3. The Excel program includes many formulas and functions that help in performing mathematical calculations. (   )
4. Column title is letters, appears at the bottom of the column. (   )

★ Second: Choose the correct answers from a, b, or c:

1. In Excel program, for sorting information in alphabetical order, go to the ....
   a) File b) Open c) toolbar
2. You can set formulas in cells to ....., subtract (-) multiply (x), or divide (/):
   a) add (+) b) subtract (-) c) a , b
3. ..... that represents data in the form of a graph in different formats.
   a) Excel program b) Word program c) Paint
4. An intranet is used to share in a .... and is more secure.
   a) Open network b) Closed network c) Online
5. To create a simple formula in a cell, first type the ......, this tells Excel you are creating a formula.
   a) sign " = " b) sign " x " c) sign " / "

SCHOOL Revision Questions ?

Vocabulary:

(1) Write and compare:

★ Write a sentence for each set of words to explain the connection between them. Then compare your sentences with a partner.

[a] networks and the Internet of Things

....

[b] Folder and File

....

[c] Survey and Graph

....

Review Questions:

(2) Read and answer:

[a] How does Fred Hiebert share information?

....

[b] What might happen if you have too many applications open?

....

[c] Give an example of a computer network.

....

[d] What is assistive technology? Write one example.

....

[e] What does it mean to follow a process?

....

[f] Name three device accessories.

....

....

[g] Write an example of a search entry using the Boolean search method

....

[h] What information might be included on a spreadsheet?

....

....

Critical Thinking:

(3) Think and answer:

[a] Explain what it means to troubleshoot an issue and provide an Example ....

....

....

[b] What type of information might a school put on its intranet? What type of formation might a school put on the internet?

....

....

[c] How might someone use a spreadsheet in their PowerPoint presentation?

....

....

Essential Question:

(4) Think and complete:

- After studying this theme, I know that I can use ICT tools efficiently to communicate effectively because:

....

....

....

....

....

....

Activity:

(5) Research, create, and show:

- Create your own exhibition about a historical site in Egypt. Find photographs or screenshots or draw pictures of it. Then make labels and write captions for your photographs and screenshots and illustrations. Include the following:

* Name of the historical site you chose.

* Location of the historical site.

* Special features of the site.

* How/when people can visit the site.

- Invite your classmates to view your exhibition.

AL FAEZ Revision Questions

★ First: Complete the following sentences from the brackets:

1. "…………" a device that connects a computer to the internet via Wi-Fi Ethernet. (HDMI – Router – Ethernet port)
2. ………. helps visually impaired do everything he needs to do, including writing papers and accessing documents on his laptop. (Screen readers – Router – Ethernet port)
3. We ……. using computer networks every day. (Computer – Networks – communicate)
4. ……., that connects wireless mobile devices over a short range to form a network to transition data between different devices. (Computer – Networks – Bluetooth)
5. ………. are groups of people, or things, that are connected to each other for a common purpose. (Computer – Networks – LAN)
6. The first stage of problem solving is ………… what's the issue? Is it a hardware or software problems? (defining the problem – Internet – Router)
7. Fred Hiebert uses email and …... to share them colleagues. (Word – video conferencing – Bluetooth)
8. It is preferable to put an appropriate name for each ………. indicating its content. (New – folder – Flash Memory)

✱ Second: Match from (A) to the suitable answer from (B):

	(A)		(B)
1	Kilobytes (KB)	A	Possible solutions, restart computer and router; check internet speed.
2	A way to access something	B	1024 byte
3	Consists of devices linked to the internet via Wi-Fi.	C	Gateway
4	Byte	D	Internet of Things
5	Problem, slow to download	E	8 bits

✱ Third: Put (✓) or (×):

1. Mr (Fred Hiebert) is a mentor who guides his students and colleagues around the world. ( )
2. There are no videos about any school subject on the YouTube channel. ( )
3. Megabits per second (Mbps), measures the speed of a network or internet connection. ( )
4. Computer networks connect computers with each other, to share important information and data. ( )
5. All computer networks are open public networks. ( )
6. To change the title of a file/folder, choose the copy command.( )
7. In Excel program, for sorting info in alphabetical order, click on Copy. ( )
8. Choose Rename command, from menu to add sub-folders. ( )



✶ First: Complete the following sentences from the brackets:

1. You must specify precisely the ……. you seek to reach online.
   (keywords – information – divide)
2. Through …… program, to set a formula, click on the cell you want to set a formula.
   (Excel – Presentation – Word)
3. You should ……. the research topic into smaller subtopics.
   (divide – subtopics – critically)
4. Mr. Hiebert uses the …… program, to write reports.
   (Excel - PowerPoint - Word processor)
5. .... has helped to make sharing information easier task.
   (Your teacher - Mr. Hiebert - Technology)

✶ Second: Put (✓) or (×):

1. The information you find during your search does not need to evaluate selection. ( )
2. Mr. Hiebert prefers to communicate with people through face to face, in-person meetings. ( )
3. Megabits per second (Mbps) measures the speed of a network or internet connection. ( )
4. Excel program that represents data in the form of a graph in different formats. ( )
5. Kilobytes (KB) = Megabyte (MB). ( )

✱ Third: Match from (A) to the suitable answer from (B):

	(A)		(B)
1	click on Sort	A	is an explorer and archaeologist
2	Mentoring	B	sorting info in alphabetical order
3	Column title	C	there are videos on each school subject.
4	On the YouTube channel	D	is advising or training someone on a subject you have a lot of experience in.
5	Mr Fred Hiebert	E	is letters, appears at the top of the column.



✱ First: Complete from words between brackets:

("=" - presentation - Excel - keywords - construction knowledge)

1. It is important to work collaboratively with classmates when ……
2. When searching online, specify …… to search for subtopics rather than using large sentences.
3. To set a formula, in Excel program Click on the cell you want to set a formula and type ……..
4. The ….. program includes many formulas that help in performing calculations
5. To prepare a ……, share your search results and decide how to format the information.

* Second: Put (✓) or (×):

1. The Ministry of Education offers students educational lessons through the educational channels of the Ministry of Education. (   )
2. Sharing information has never become vital in our day-to-day lives. (   )
3. 1 byte = 8 bits = 1 character. (   )
4. Technology is a long connector that transmits data or power between devices. (   )
5. Ethernet cable a device that connects a computer to the internet via Wi-Fi Ethernet. (   )

* Third: Rearrange the steps to create the main folder:

(   ) Then select Folder from the submenu. A new subfolder appears.

(   ) Right click on the place where you want to create the folder.

(   ) Select New.



* First: Choose the correct answers from a, b, or c:

1. The ……. contains a huge amount of information.

a) data　　b) Internet　　c) School

2. An intranet is used to share in a …….. and is more secure.

a) Open network　　b) Closed network　　c) Online

3. Mr. Hiebert uses the …… program, prepare and show graphs.

a) Word processor　　b) PowerPoint　　c) Excel spreadsheet

4. ......, measures the number of cycles your CPU carries out per second: the higher the number, the faster the speed.

a) Gigahertz (GHz) b) Closed network c) Open network

5. ...... is a great way to pass on knowledge and skills.

a) Mentored b) Closed network c) Open network

* Second: Put (✓) or (×):

1. The Egyptian Knowledge Bank, connect computers with each other, to share important information and data.. ( )
2. Megabyte (MB) = 1024 (B). ( )
3. It is important when looking for information to plan your research and verify the information you find critically. ( )
4. Virtual meetings, or video conferencing, provide an effective method to mentor others. ( )
5. Cable is on the WWW, available for free to all Egyptians who register on the site. ( )

* Third: Match from (A) to the suitable answer from (B):

	(A)		(B)
1	Bit	A	The largest unit of data
2	Problem: Not able to store files.	B	We communicate using them every day
3	consists of devices linked to the internet via Wi-Fi.	C	Not enough space - move old files to an external drive.
4	Terabyte (TB)	D	Internet of Things
5	computer networks	E	The smallest unit of data.

Theme 2

Digital safety and security precautions.



ESSENTIAL QUESTION:

How do we keep ourselves and our data safe and secure when using ICT tools?

SPOTLIGHT on theme 2

- As you get older, you may use the internet more and more, to conduct research, send and receive messages, access social media sites, and watch videos. The internet is a great place to learn and hang out with friends, as long as you do these things safely.

- In this theme, you will learn how to stay safe online. You will learn how to protect yourself! your personal information, and your data. You will also learn how to conduct online research using reliable sources, follow online rules and laws, and respect other people's creative work.